

irradiated from said back surface of said substrate are either a linear shape or a band shape,

wherein an irradiation region of said first laser beam and the irradiation region of said second laser beam are parallel with each other, and

wherein said substrate is moved in the direction of the width of said irradiation region while irradiating said first laser beam and said second laser beam.

68. A method according to claim 67, wherein a non-single crystal semiconductor film is formed over the front surface of said substrate, and wherein the energy of said first laser beam irradiated from the front surface is higher than the energy of said second laser beam irradiated from the back surface.

69. A method according to claim 67, wherein a non-single crystal semiconductor film is formed over a surface of said substrate, and wherein a ratio of the energy of said first laser beam irradiated from the front surface and the energy of said second laser beam irradiated from the back surface is between 1 to 1 and 10 to 1.

70. A method according to claim 67, wherein said substrate is arranged in a direction parallel to the direction of gravity when said first laser beam and said second laser beam are being irradiated.

71. A method according to claim 67, wherein said substrate is disposed into an atmosphere that has a pressure of between an atmospheric pressure and  $10^{-3}$ Pa.

72. A method according to claim 67, wherein said substrate is disposed into an atmosphere formed of gases such as Ar, H<sub>2</sub>, N<sub>2</sub>, He, or a gaseous mixture.

73. A method according to claim 67, wherein at least the irradiation region of said first laser beam and the irradiation region of said second laser beam in said substrate are heated between 10° and 500°.

G' 74. A method according to claim 67, wherein said first laser beam and said second laser beam are excimer lasers.

75. A method according to claim 67, wherein said first laser beam and said second laser beam are XeCl excimer laser beams.

76. A method of manufacturing a semiconductor device in which a laser beam is simultaneously irradiated from a front surface and a back surface of a substrate,

wherein a shape of said first laser beam irradiated from the front surface of said substrate and of an irradiation region of said second laser beam irradiated from the back surface of said substrate are either a linear shape or a band shape,

wherein an irradiation region of said first laser beam and the irradiation region of said second laser beam are parallel with each other,

wherein a width of the irradiation region of said first laser beam is smaller than a width of the irradiation region of said second laser beam irradiated from said back surface, and

wherein said substrate is moved in a direction of the width of said irradiation region while irradiating said first laser beam and said second laser beam.

77. A method according to claim 76, wherein a non-single crystal semiconductor film is formed over the front surface of said substrate, and wherein the energy of said first laser beam irradiated from the front surface is higher than the energy of said second laser beam irradiated from the back surface.

6' 78. A method according to claim 76, wherein a non-single crystal semiconductor film is formed over a surface of said substrate, and wherein a ratio of the energy of said first laser beam irradiated from the front surface and the energy of said second laser beam irradiated from the back surface is between 1 to 1 and 10 to 1.

79. A method according to claim 76, wherein said substrate is arranged in a direction parallel to the direction of gravity when said first laser beam and said second laser beam are being irradiated.

80. A method according to claim 76, wherein said substrate is disposed into an atmosphere that has a pressure of between an atmospheric pressure and  $10^{-3}$ Pa.

81. A method according to claim 76, wherein said substrate is disposed into an atmosphere formed of gases such as Ar, H<sub>2</sub>, N<sub>2</sub>, He, or a gaseous mixture.

82. A method according to claim 76, wherein at least the irradiation region of said first laser beam and the irradiation region of said second laser beam in said substrate are heated between 10° and 500°.

83. A method according to claim 76, wherein said first laser beam and said second laser beam are excimer laser beams.

84. A method according to claim 76, wherein said first laser beam and said second laser beam are XeCl excimer laser beams.

85. A semiconductor device, wherein a crystalline semiconductor film having a crystal grain size of between 500 nm and 3 μm is utilized as an active layer.

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